3S-ALBEDO
Albedometer

SEVEN SENSOR SOLUTIONS

Albedometer

The Albedometer is part of the SEVEN meteorological sensor range, which includes professional and intelligent measuring sensors for environmental and industrial applications such as PV plants.

The albedometer simply consists of two irradiance sensors, where the upfacing sensor measures the incident horizontal irradiance and the downfacing sensor measures the reflected irradiance. It helps to calculate the performance ratio and measure the solar albedo. Solar albedo is the ratio of reflected irradiance to horizontal irradiance.

The measured values can be transmitted to dataloggers and receiving units via the serial RS485 interface with MODBUS RTU protocol.

SEVEN products use reliable and high-quality components to provide accurate meteorological data. The Albedometer is specifically designed according to the requirements of PV plant monitoring systems.

Benefits and Features

- Class A Compliance
- Similar Structure with PV Modules
- Fast & Simple to Install
- Low Power Consumption
- Free Software Update
- SEVEN Remote Setup Service
- SEVEN Customer Support
- 5 Years Warranty

Technical Specifications

Sensor Type	Silicon Reference Cell (31 x 31 mm)
Measured Data	POA Irradiance, Reflected Irradiance and Solar Albedo
Irradiance Range	0 - 1600 W/m²
Uncertainty	≤1,2% (less than 2%; as per IEC 61724-1 standard Class A)
Resolution	0.1 W/m² (less than 1 W/m²; as per IEC 61724-1 standard Class A)
Response Time	1 sec (less than 3 sec; as per IEC 61724-1 standard Class A)
Field of View	170° (Larger than 160° as per IEC 61724-1 standard Class A)
Tilt-Azimuthal Angle	0°- 0° (≤1°; as per IEC 61724-1 standard Class A)
Output Rate	1/sec
Data Output	RS485 up to 38400 Baud
Communication Protocol	Modbus RTU
Power Supply	12 to 30 V DC
Power Consumption	20 mA max @24 VDC
Electrical Connection	3 m LIYYC11Y PUR Cable, UV and Weather Resistant
Galvanic Isolation	1000 V between power supply and RS485 bus
Operating Temperature Range	-40°C to + 85°C
Operating Humidity Range	0 to 100 %
Box Dimensions	210 mm x 155 mm x 85 mm (L x W x H)
Weight	0.67 kg
IP Rating	IP54 (Optional IP 65, IP 68)
Sensor Housing Material	Aluminum
Standard	IEC 61724-1:2021 and IEC 60904
Calibration	Each sensor is calibrated under Class AAA Sun Simulator as per IEC 60904-2 and IEC 60904-4 by using a reference cell calibrated by ISFH-Germany
Origin	TÜRKİYE

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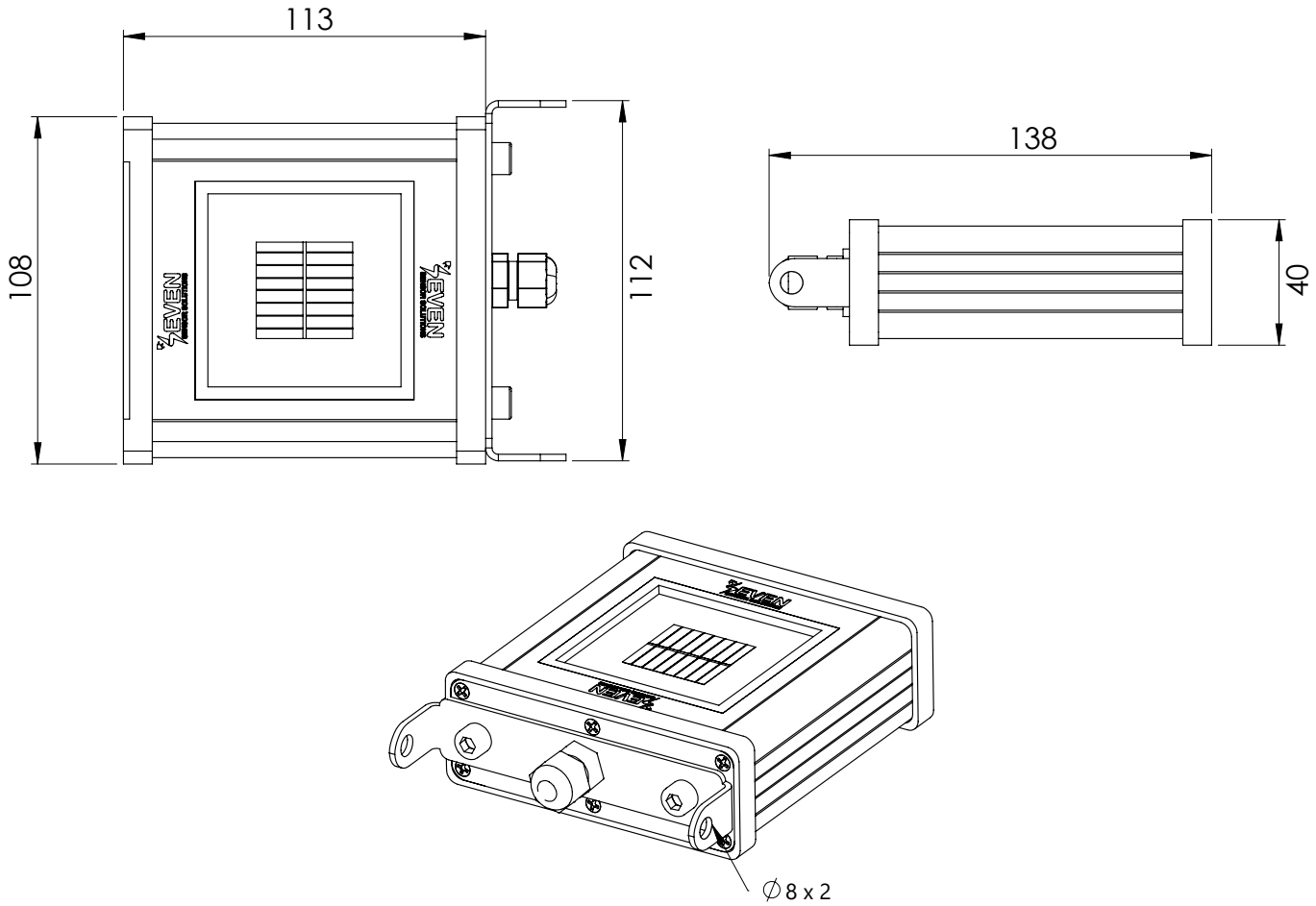
Revision 2.0

Technical Drawings

Technical Drawings of 3S-ALBEDO



Note: All dimensions are in mm.

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